November 2015
KUNK(FM) Channel 270A
Mendocino, California
Principal Community Coverage Study

The 70 dBu contour from the proposed facility, as calculated using the standard contour prediction methodology described in §73.313 of the Commission's Rules, does not encompass the entire community of Mendocino. The far side of Mendocino is located approximately 18.4 kilometers from the proposed transmitter site. The standard 70 dBu contour extends approximately 17 kilometers towards Mendocino. However, it is believed that a supplemental showing using alternative contour prediction methodology is justified in this instance in accordance with §73.313(e).

The entire community of Mendocino is encompassed by the proposed 60 dBu contour. The attached map exhibit depicts the community boundary of Mendocino as taken from the 2010 Census.

Longley-Rice

Study has been made of the predicted 70 dBu field strength over Mendocino, using the Longley-Rice v1.2.2 methodology. This study has been conducted using the software program SIGNAL™ from EDX Wireless, utilizing the 3-second terrain database.

A sample calculation has been made to a location within the community boundary of Mendocino to verify the presence of 70 dBu service, using the formula:

Field Strength = Free Space - Diffraction Loss - Clutter
Where Free Space = 106.9 + power in dBk - 20log(distance in km to point of interest)

For the path studied (4.77 dBk over a 17.2 km path), the result of this calculation is:

Radial	Free Space Field	Minus Diffraction Loss	Yields
190 deg	87.0 dBu	9.7 dB	77.3 dBu

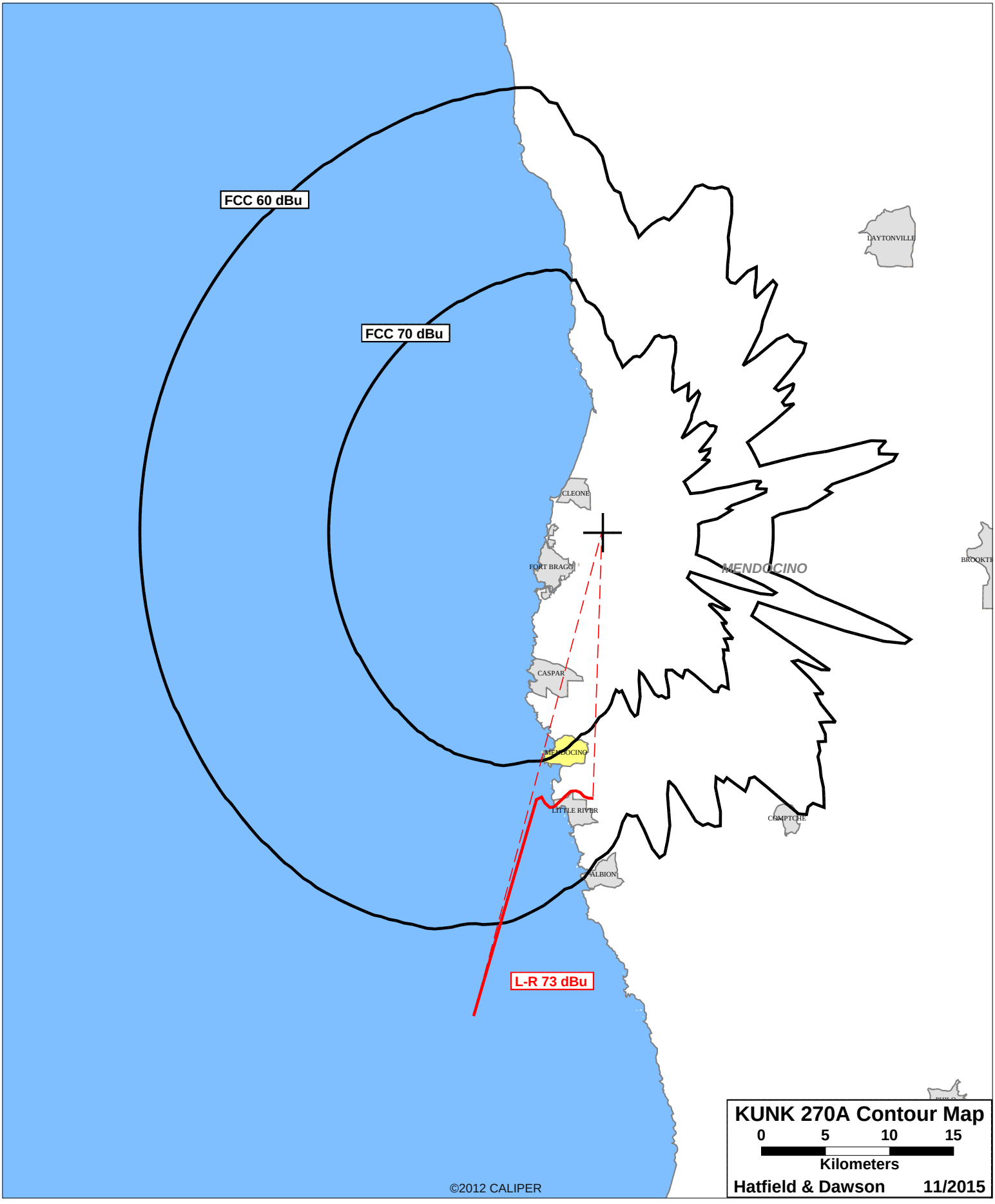
Attached is a plot of the terrain path from the transmitter site to the sample location in Mendocino. The attached terrain path plot includes a list of the Longley-Rice study parameters.

Mendocino is a rural community without many large buildings or large trees. It is believed that a local clutter factor of 3 dB is appropriate for this community.

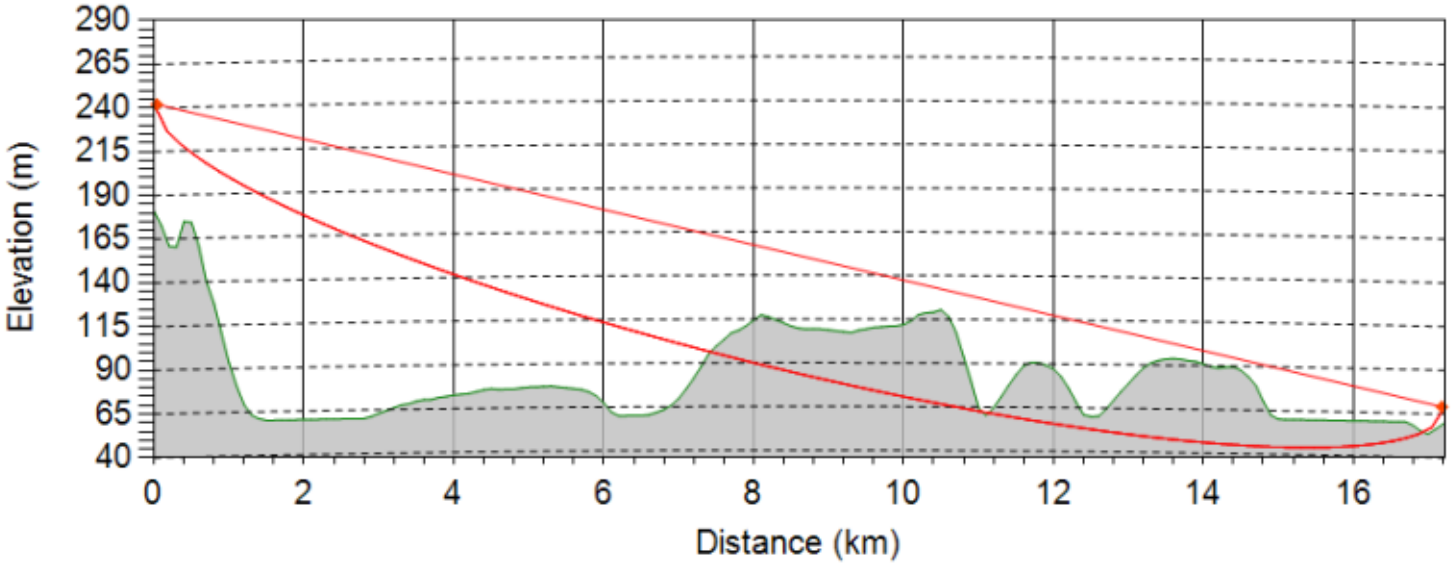
The location of the Longley-Rice 73 dBu contour (chosen to allow for 3 dB of local clutter loss at the receive locations) in the direction of Mendocino has been determined for 2-degree increment radials passing through Mendocino. This contour has been plotted on the attached contour map exhibit, and encompasses 100% of the area and 100% of the population of Mendocino.

Radial	**F(50,50) 70 dBu**	**L-R 75 dBu**	
182	14.6 km	20.7 km	
183	15.1 km	20.7 km	
184	15.3 km	20.6 km	
185	15.6 km	20.2 km	
186	15.7 km	20.2 km	
187	16.1 km	20.3 km	
188	16.5 km	20.7 km	
189	16.9 km	21.2 km	
190	17.2 km	21.7 km	
191	17.5 km	21.8 km	
192	17.8 km	21.5 km	
193	18.1 km	21.1 km	
194	18.3 km	21.4 km	
195	18.4 km	39.0 km	

The distance to the Longley-Rice contour exceeds the distance to the standard 70 dBu contour by 16% or more.


FCC 60 dBu
FCC 70 dBu
L-R 73 dBu
LAYTONVILLE
CLEONE
FORT BRAGG
MENDOCINO
CASPAR
MENDOCINO
LITTLE RIVER
COMPTCHE
ALBION
BROOKTR
©2012 CALIPER
KUNK 270A Contour Map
0 5 10 15
Kilometers
Hatfield & Dawson 11/2015

Link: Tx002 -> Rx002



Link end 1 ID:	Tx002	Link end 2 ID:	Rx002
Site name:	KUNK Bald Hill	Site name:	Mendocino
Latitude:	N39°27'54.00"	Latitude:	N39°18'45.34"
Longitude:	W123°45'28.00"	Longitude:	W123°47'36.92"
Transmitter Frequency:	101.9 MHz	Received signal level:	-37.95 dBmW (77.3 dBu)
Polarization:	horizontal	Receiver noise level:	-100.63 dBmW
Antenna elevation (AMSL):	242.00 m	Antenna elevation (AMSL):	69.10 m (9.1m AGL)
Point az. to link end 2:	190.30°	Point az. to link end 1:	10.28°
Pointing elev. to link end 2:	-0.58°	Pointing elev. to link end 1:	0.50°
Antenna gain toward link end 2:	0.00 dBd	Antenna gain toward link end 1:	0.00 dBd
ERPd toward link end 2:	4.77 dBkW	Net diversity gain:	0.00 dB

Path:	Tx002 -> Rx002
Length:	17.2199 km
Number of obstacles:	0
Excess pathloss:	9.69 dB
Atm. Absorption loss:	0.00 dB
Path loss for Stats:	107.02 dB
Path Fresnel zone clearance:	----
K factor:	1.333